

Claim 1

Claim 1 requires in part:

... polling each of the communication stations to transmit data ... for the plurality of communication sessions according to the polling pattern; ...

and

... adapting the polling pattern including for each of the communication sessions adapting a rate of polling associated with said session according to said monitoring [of data transmitted by the communication stations in response to the polling] ...

The office action asserts that the secondary reference, Joshi, provides these features, stating:

Joshi discloses an adapted polling pattern that includes specifically polling each active station, as well as generally polling the inactive stations (col. 11, lines 34-60). This the inactive stations are in fact polled, albeit at a less frequency than the active stations. (Office Action ¶2).

There are a number of reasons that the Applicant does not agree with this position that Joshi provides what is required by the claim.

Joshi's general polls are not "to transmit data ... for ... communication sessions"

The Applicant recognizes that Joshi discloses an approach in which stations are in either an active or inactive state. In the active state, a station receives a specific poll and in return transmits a response such as application data or a transmits a negative acknowledgement. (col. 8, lines 23-29). Separate from the specific polls to active stations, a general poll is sent to the

stations in the inactive state, and in return a station in the inactive state may transmit a response requesting to become active. (col. 9, lines 8-16).

The Office Action is relying on Joshi's disclosure of determining the relative frequency of specific polls to the frequency of general polls as the recited "adapting the polling pattern." However, the Joshi's sending of the general polls is not "polling each of the communication stations to transmit data ... for the plurality of communication sessions" because the general polls solicit requests to become active rather than soliciting data for communication sessions. Therefore determining the relative frequency does not amount to "adapting the polling pattern" of the specific polls "according to said monitoring" of data transmitted in response to the specific polls.

Joshi does not disclose "continuing polling ...according to the adapted polling pattern,"

Joshi also discloses that a station that repeatedly fails to respond to a sequence of specific polls may be placed in the inactive state by the access controller. (col. 8, lines 52-57). If on the other hand one were to consider only the specific polls as corresponding to the recited "polling each of the communication stations to transmit data ... for the plurality of communication sessions" then Joshi fails to also disclose "continuing polling of each of the communication stations according to the adapted polling pattern," which is also required by the claim. Rather, once a station is removed from the active database, it does not receive specific polls.

Joshi does not adapt a rate of polling "for each of the communication sessions"

Claim 1 also requires that the adapting of the rate of polling be performed for each session: "...for each of the communication sessions adapting a rate of polling associated with said session...". But Joshi does not disclose or suggest adapting a rate of specific polls for each of the sessions. Rather, in Joshi, stations are either specifically polled at a common rate, or they do not receive any specific polls because they are in the inactive state.

There is no motivation to modify Ruszczyk with Joshi

The Office Action has failed to identify a suitable motivation for modifying Ruszczyk with Joshi's approach of selective and general polling. Specifically, the Action states:

... Joshi provides an improvement over the invention of Ruszczyk that would make the polling pattern more efficient. In view of an improvement to an invention, it is obvious to anyone of ordinary skill in the art to actually add that improvement to the invention whether the original inventor specifically states a need for improvement or not. (Office Action ¶3)

The rationale that any improvement is somehow inherently motivates is not adequate. There is nothing in the references that suggests that Ruszczyk has any difficulty with non-responsive stations, or that he would benefit from adapting his polling rate in any particular way.

Dependent claims of claim 1

Dependent claims that depend on claim 1 are allowable for at least the reasons set forth above for claim 1. There are further reasons that the dependent claims are allowable. For example, the following features are not disclosed or suggested by the cited references:

Claim 24: "receiving statistics related to the communication session and ... allocating the resources in accordance with the received statistics." The Office Action cites Joshi's disclosure of varying the proportion or percentage of channels allocated for specific polling in response to transmission requirements of the network (col. 13, lines 54-58). The references do not however disclose or suggest receiving the statistics, or that any received statistics are related to the communication sessions.

Claim 25: "the [received] statistics include a queue length for a session" and "adapting the polling sequence according to the queue length." The Office Action relies on Lyle to provide the adaptation according to queue length. Lyle may teach maintaining a queue for different traffic types, but the Action has failed to identify how the teaching in Lyle provides the features of receiving the queue lengths as part of the statistics for a session, and adapting the polling sequence for the session according to the received queue length.

Claim 47: "reducing a rate of polling for a session in response ... to a reduction in actual rate of transmission" and "increasing a rate of polling ... in response ... to an increase in actual rate of transmission." None of the cited references disclose or suggest such reducing or increasing of a rate of polling.

Claims 15, 17, 21, 41, and 43 and their dependent claims

Claims 15, 17, 21, 41, and 43, and their dependent claims, are allowable for the reasons set forth above for claim 1.

Claim 35 and its dependent claims

Claim 35 requires that stations share access to a communication network according to a multiple-access media access control protocol. Although the stations in the cited references may share a medium, the references do not disclose a multiple access protocol.

Furthermore, with regard to claim 37, there is no suggestion in the references that the polling approach recited in claims 35-36 would be used with Ethernet, which is a random access protocol.

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Respectfully submitted,

J. Robin Rohlicek

J. Robin Rohlicek, J.D., Ph.D.

Reg. No. 43,349

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906